



THE POWER TO CONNECT

Self-Service Content Delivery Network Overview



Version 1.1

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Overview

Do we have a solution? Absolutely! However, we feel it is critical for you to understand the power behind the product and the key to a successful partnership before any product is detailed or recommended.

Consider This ...

Ask yourself the following questions:

- Are there benefits in choosing a strong market leader with over seven years of experience?
- Can other providers match the depth of industry experience?
- Can any other competitors offer Process Automation expertise, Integrated Merchant Service, and Wireless Handheld Interface capabilities coupled with an award winning product?
- You're betting part of your business on this decision. Can you afford to be wrong?

There are few interactive technology partners who can display a stronger sales and service philosophy than that of Livewire. The combined total resources available through Livewire and our sister organization, JLS Automation, is 48 people with a combined years of service well over 300 Years! Couple this with our "Best of Breed" partnerships and you have very few organizations standing at this level.

Livewire Content Delivery Network

The Business Advantages of a Hosted Application

By deploying in a hosted client/server environment, smart businesspeople are realizing the benefits of renting rather than owning the application and more importantly, the management, maintenance and technology upkeep so important in keeping the application functioning as their needs and deployment grows.

Flexible financial packages can be designed to maximize financial resources without the worries of staying on the "cutting edge" of technology. Ala cart pricing means you pay only for what you require and allows for planned growth as your needs mature. Your investment is protected by an annual maintenance program that assures you always have the latest offering and versions available to you without the cost of a complete upgrade. Upgrades can be reviewed and determined if they will be used. You only pay to install the upgrades and enhancements you require.

Our packages can be tailored to include many services that are normally out of the reach of a smaller client and financially unattractive to larger clients such as call centering, device maintenance and network monitoring and administration.

What does this mean for our clients? They can focus on what they do best and that is sell and market their offering without worrying about the technology behind it and save money along the way.

Where are our applications utilized?

- Event Ticketing
- Movie Ticketing
- Transportation Ticketing
- Sports and Entertainment Ticketing
- Pay For Use Internet Access (Cyber Café)

- Retail Gift Card/Gift Certificate
- Human Resource Management
- Concierge
- Gift Registry
- Pre-paid telephone and cell phone

The Livewire Network Capabilities

Livewire Enterprise and the Livewire Network are a set of application modules that form a comprehensive suite for the management of attended or unattended / self-service devices. This document has been created to explain the requirements for self-service devices and the ways in which Livewire and Livewire are a key enabling technology for the deployment and operation of such applications.

A fundamental consideration in this is the use of PC-based architectures that need specialized software to provide the robust, reliable solutions required for unattended devices. With Livewire and Livewire the functionality and effectiveness of self-service devices has moved to a new level. The open, modularized architecture and easy integration with existing systems cut development time significantly – so projects can be up and running sooner and save both time and cost.

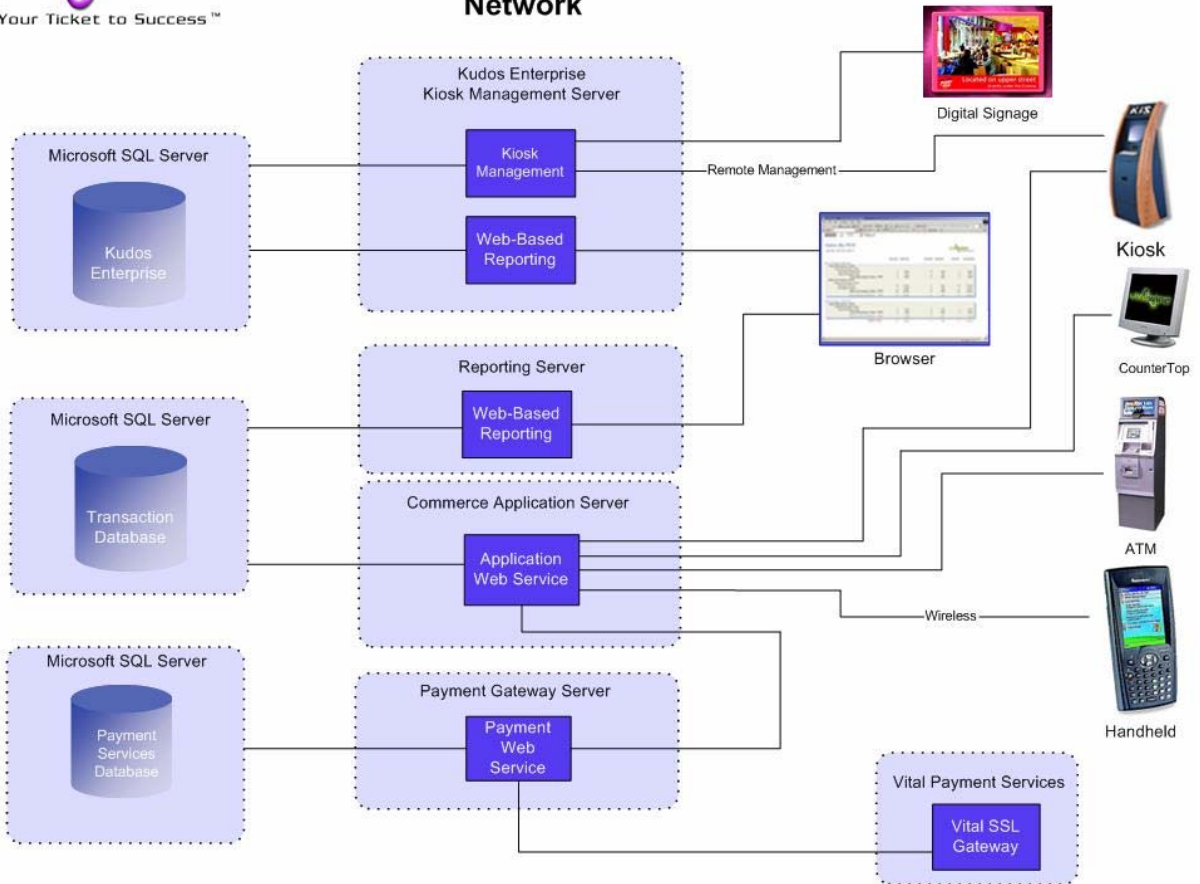
Remote updating processes mean you can enjoy centralized management of applications and version control. This is very important as a deployment grows beyond a few devices and allows software, content and graphic changes to a specific device. Highly specialized tools monitor the health of each device and provide critical information on usage patterns and other business metrics. The Livewire suite delivers a revolutionary new standard for both customer experience and for the operations of larger self-service networks.

The Livewire Content Delivery Network is utilized by many industries across various disciplines to centrally manage and control the delivery of products and services utilizing many different delivery devices both self-served and attended. The Livewire Network affords end-to-end management of virtually any delivery application imaginable.

Drawing on the power of the Livewire Operating Environment described later as the core of the Network, Livewire enhances these offerings by offering directed applications geared directly to a clients needs. The strength of the Livewire Network is the ability to seamlessly conduct transactions in an unattended environment, offer-up Internet content in a secured manner and remotely monitor and manage a host of devices from a central location. Coupled with real-time web based access and reporting, the Livewire Network is the most comprehensive Delivery Network in the marketplace today.



Self-Service Content Delivery Network



Complex Applications without Complexity

Directed Configuration – It Becomes You

The true power of the network is the ability to configure the applications to do the things you need it to do in the way you want it done. The Livewire Self-Service Content Delivery Network affords quicker configuration of complex applications with powerful tools and the repurposing of previously deployed applications. This means a system that works the way our clients work. “Custom” applications become standard offerings and can be repurposed by other clients. This means a lower cost to deploy than custom applications. Our network and tool set has been utilized to create powerful full-featured applications without the up-front costs associated with “packaged” systems yet possesses the same if not more features typically found in these systems. Livewire has configured systems to be used in many industries across many applications.

Web ordering and reservation

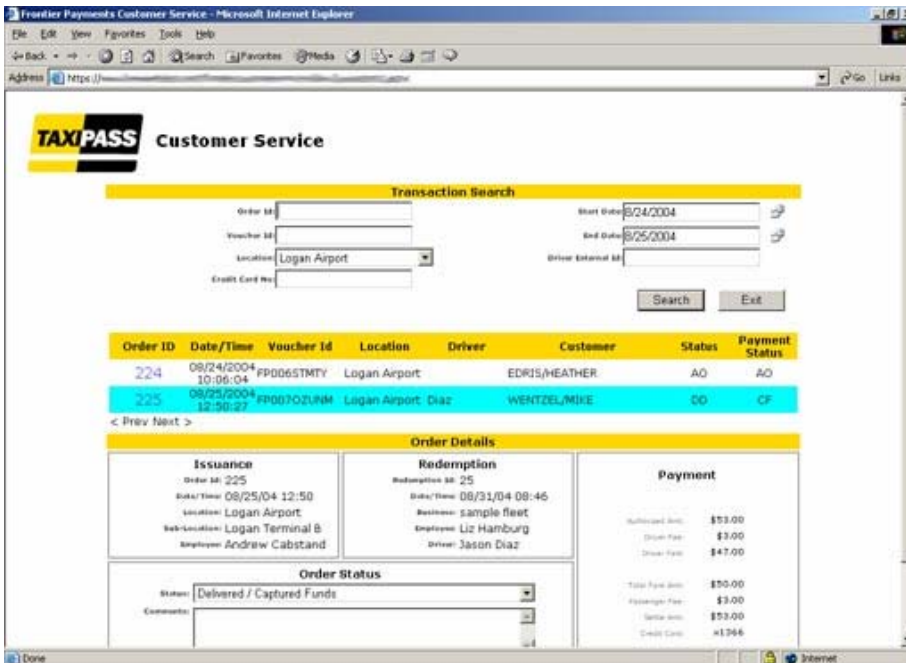
An example of a feature found in “packaged” systems is the ability to reserve tickets from a web page and deliver at a will-call device. Our web interface also allows buy at home tickets that utilize a unique bar code to gain entrance into an event and reduce “scalping”. This is just an example of the power of our network and our flexible architecture.



Web Reservation Example

Administration Screens

Administration screens allow user access to the database without programming. These screens can be configured to allow many different functions such as customer service applications or event management. Each screen is secured by user login permissions.

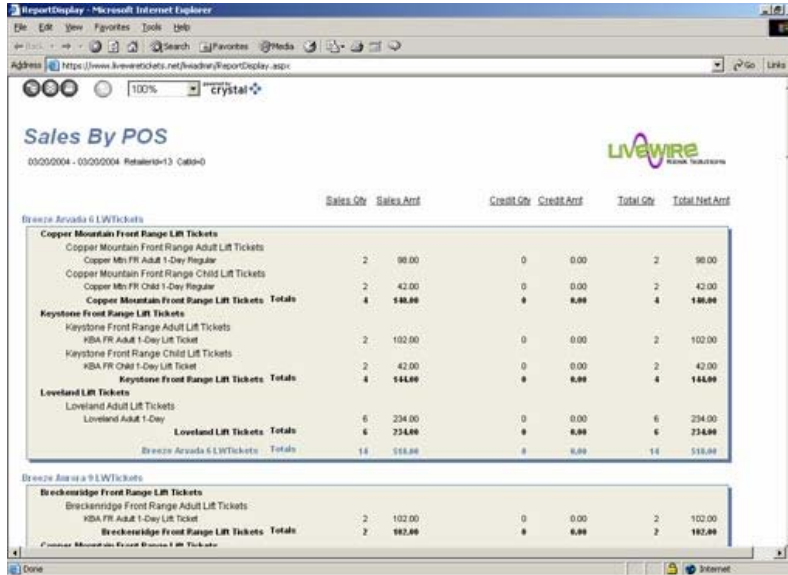


"Customer Service" Application

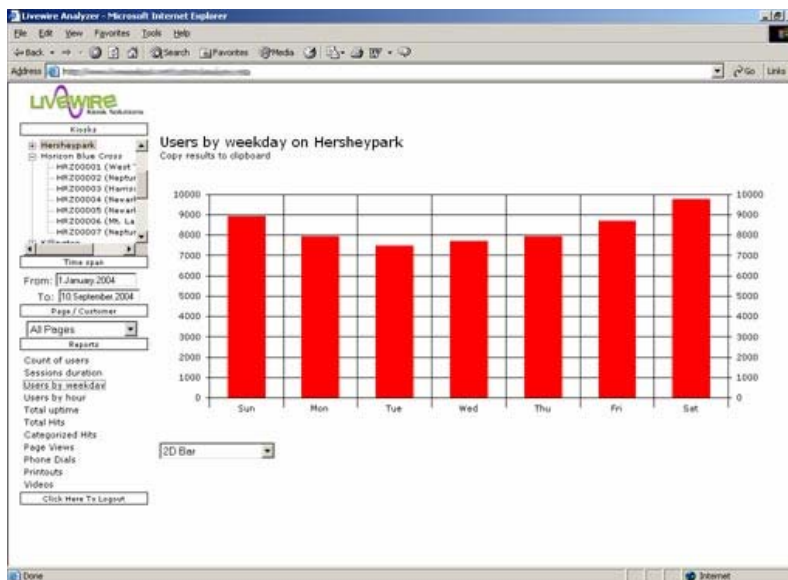
Real-time Reporting

Clients are also provided with access to real-time reporting. These secured web-based pages are tied to the database, and provide a view into information relevant to your application in a real-time environment. By utilizing standard reporting tools such as Crystal Reports, reports can easily be modified and configured to meet the needs of each client. These reports can be accessed from any web-enabled PC. Reports can easily be exported to other applications such as Excel, for manipulation or imported into other accounting type applications for additional analysis.

Also, statistics provide a view into how users and customers are using the system



A web-based report example



Statistics example

Real-time Alerts (Monitoring)

The Devices on the network are monitored 24/7 by Livewire. Certain conditions result in email being sent to appropriate persons to warn of the need to attend to a certain device. In the event of an out-of-paper stock condition or printer jam, a screen is presented to the customer that there is a printer problem, and the customer is instructed to contact an associate. At the same time, a message is immediately emailed to technical support personnel. Often, technical support is able to call the client and notify them of the problem prior to them finding out from the device user. When the printing problem is cleared, the printing process can be continued by using a 'Print Retry' button on the device. This assures your devices are up and functioning doing the things they were intended to do.

Hardware Maintenance

Livewire offers several types of maintenance programs to keep your field device hardware operational. Clients can choose to either treat hardware issues on a straight time and material basis where you pay only if you need to utilize our network of national support technicians or for better piece of mind, clients can elect to contract a fixed fee on a per device basis. Annual fees are based on the type of each device, the components they deploy and the response time required. Livewire strives to make a package to fit your objectives and your budget.

The Power Behind the Product and the Livewire Content Delivery Network

What are self-service applications looking to achieve?

In simple terms a self-service device is looking to make money, save costs or extend a service in information delivery, image or the brand-related functions of products and services.

The challenge for any self-service device today is to deliver applications that apply 'human factors' needed to meet the consistent benchmark of 'ATM-like' performance. Furthermore, today's consumers demand an engaging experience if they are to interact and adopt technology often in place of interfacing with an individual.

Often a well-implemented self-service program provides the dual benefit of simultaneously improving consumer satisfaction while lowering overall costs. Confidence in the total experience being provided is essential to ensure acceptance of consumer facing technology as an alternate means to achieving a required outcome. Additional value is created when the self-service device presents an engaging user experience; rich, intuitive, easy-to-use, and appealing to encourage customers to use a self-service approach – time and time again.

'Make Money' devices come from direct revenue generation such as payment kiosks in ticketing or fast food restaurants with proven up-sell capabilities, as well as queue-busting and lowering of staff numbers required to manage the restaurant. 'Save Money' is often achieved through decreased transaction costs and lowering the need for staff and the associated training costs.

With a service or information-oriented kiosk, there can often be a number of applications delivered off a single platform. Beyond delivery of content or detail, other functions such as staff training can be accomplished using a single device.

Participation for the consumer in a positive personalised event using an intelligent device consequently can produce an enhanced perception of the brand.

The Challenge for Successful Installations

When deploying a 'Make Money', or 'Save Money' device, it is possible to simply analyze the return on investment (ROI), for a basic measure of success. Using a more involved assessment is often needed as the non-tangible benefits of taking tasks from a till position is not always as easy to estimate. If direct financial benefit cannot be measured effectively, projects often never get beyond the pilot stage

To date, deployments of applications on self-service devices have been met with very mixed results. In most cases the installations have not met the wide range of demands required to efficiently manage the multiple levels of complexity of these often remote and widely dispersed networks. It is a common misconception that placing a Web application onto a device is sufficient for success. The reality however is that the Web and self-service devices are different mediums that require different approaches.

Managing the PC-based architecture demands complexity of the self-service software to work with the total device, operating system and application to ensure that the business functions can be met. Remote management of the device and application is also essential, as staff do not take responsibility for the devices when they are assumed to be accountable for their support.

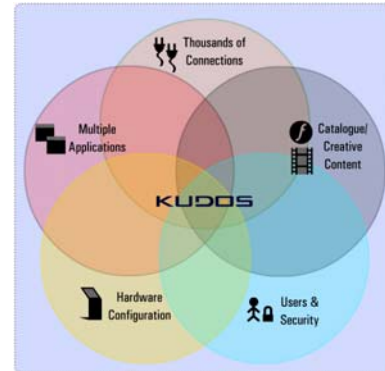
Accordingly, a user experience cannot be compromised as a result of limited device availability or inappropriate user interface design. If a device is not operational when approached by a consumer on the first few occasions, they are not likely to return in future, as they will continue to question reliability.

Key decisions then exist as to whether you build a capability or buy a packaged solution from Livewire. Many points need to be considered; core competencies, available resources, levels of risks acceptable, time to delivery, flexibility and scalability. Our challenge would be that you should be working with a company offering a solution, assistance and expertise to deploy an ROI driven approach to your self-service solution.

Solving the challenges of self-service applications with Livewire

When installing larger networks of self-service devices, one has to address key factors such as multiple locations with multiple applications on various hardware configurations. Handling this level of complexity in small networks of even one hundred devices becomes unmanageable [See Figure 1].

The Livewire Content Delivery Network has been specifically developed to address this level of complexity. Comprehensive management of self-service devices has to cover a number of areas, and Livewire provides the expertise, applications and infrastructure to ensure a successful network of self-service devices.



Reliability is Paramount - the damage of the device or particular services being unavailable creates untold damage. Once users, or even staff, lose confidence they rarely return to use the self-service device.

The software tools on the device itself and the central management server offer both Proactive and Reactive capabilities to maximize availability. Constant monitoring of all components in the total environment, allied to an ability to see potential issues in applications or system processes ensures faults can be spotted and rectified. At times this occurs before the device fails.

Central capability exists in the Enterprise manager to quickly spot these conditions, allow interaction with the remote equipment, even whilst a customer is transacting with your application, and perform the remedial or recovery activities to maintain device availability.

Lower costs and lower overheads with a Livewire Solution - The hidden costs that are not always obvious can offset any planned paybacks. Multiple intelligent devices housed in an enclosure or an unattended PC that is integrated to various other systems and capabilities can all add hidden cost to operate and maintain.

The Livewire Network can act as a complete software solution, giving a single link to the various other systems in a customer's total architecture that need interaction, be it a transactional system for sale of product/service, a Management platform for Merchant Services, Gift Card Services, Graphics Packages or other Enterprise Applications. A single connection point or interface of the Livewire Enterprise Server will lower the cost of integration as well as development time to deploy the application.

Also, Livewire can efficiently manage the process of moving data between self-service devices, as well as to and from the central Enterprise management system. Examples of direct cost savings are; a single transfer to a master device which Livewire can then seamlessly distribute to local machines, resending only the data missed if an error in the communications link occurs, throttling transfer data rates over any type of network infrastructure and ensuring the application transactional traffic has priority.

The other major cost often overlooked is the central and remote staff that need to be trained and then engaged in the operation of the solution. Livewire enables complete visibility and control

centrally that can be automated, removing the time taken and staff requirements to maintain the working system.

Unattended devices secure and controlled from tampering or intrusion - An obvious need is to prevent the risks of unauthorized access to the device itself, as well as allowing the device secure access to the systems that it connects too.

On self-service devices, Livewire has experience at preventing unauthorized access to the system or any application/process that manages the machine. Some of these capabilities include tools that manipulate the operating system, optimize the Browser, and segment some applications whilst locking down others.

Interaction between the Enterprise Server and devices is tightly controlled using methods that easily support Firewalls. Updates and exchange of data can also be controlled or initiated from either end, to maintain security across different network configurations.

Transport of data on the Livewire solution can all be done using a secure network protocol to prevent any data being intercepted and interpreted.

How large do you want to grow, Livewire has no limits - The use of pilots to validate a business concept will often fail to highlight the challenges of managing a large estate of devices. The challenges and cost of updating multiple devices and being able to comprehend the information flows that communicate what is happening can easily be overlooked.

Livewire software has tools to assist in configuring, building and maintaining, using a hierarchical approach to deploy and maintain any size of estate. This approach is based upon attributes to separate the estate into the logical, physical or other factor that makes sense.

Livewire Enterprise: The solution for self-service device management

Enterprise class – Demands for scalability and performance have significantly increased with the emergence of larger networks and increasing amounts of bi-directional data flow between devices and the central server. These issues have been a key consideration throughout the development of Livewire Enterprise. Several advances have been made in the creation of a seamless multi-tier architecture, effective hardware load balancing and the flexibility that together contribute to the maximisation of performance and reliability of Livewire.

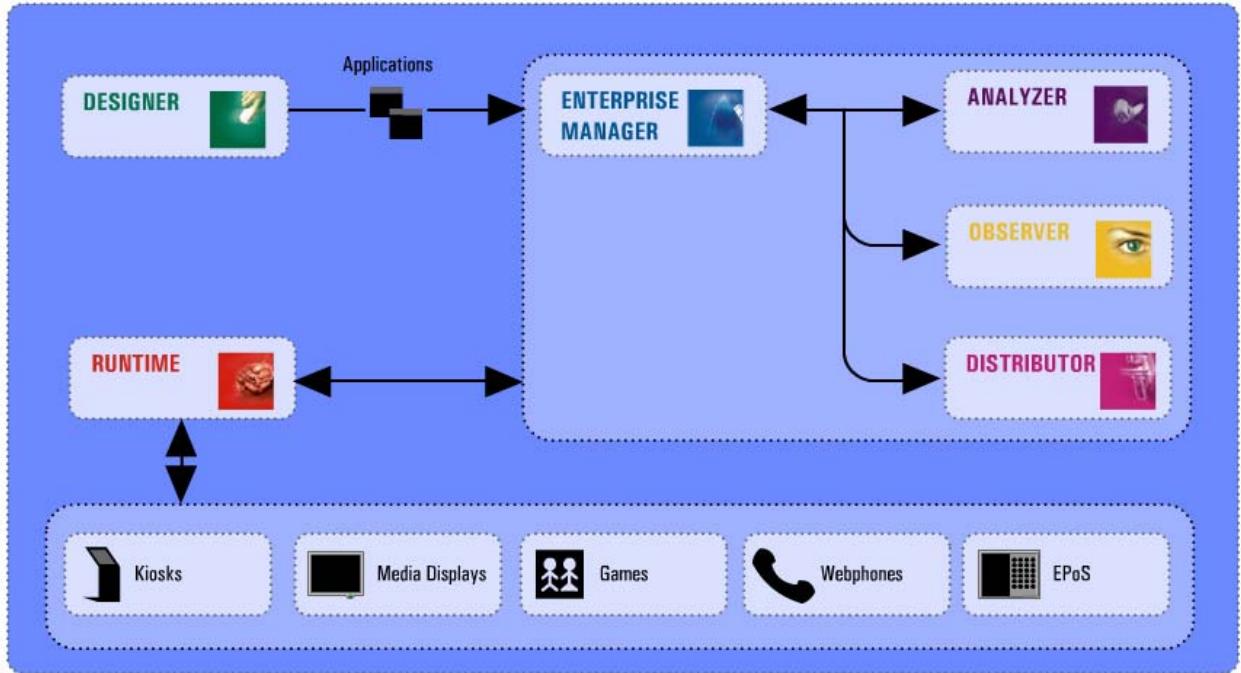
Variables such as network growth, frequency of updates, usage and server load have all been evaluated. With the ability to adapt to increasing demands, Livewire has proven itself a truly robust, scalable and enterprise class system, capable of supporting networks of any size. As a result, businesses can be confident that Livewire is able to support the growth and evolution of their network of devices.

Application hosting and management of the self-service devices – Livewire is an ideal environment for hosting applications on the client. Multiple applications can be deployed to each device, for example, hosting a consumer facing transactional application as well as a human resources application for training staff. Added to this is the extensive portfolio of drivers for integrating appropriate peripherals onto the self-service devices.

As the core software to managing a network of devices, Livewire integrates relevant peripherals onto the application, monitors processes on the total system and ensures all elements on the device are operational. In this way, Livewire ensure the health of the device, alerts the central systems of any potential issues and allows fast reaction to maximise uptime of all the devices.

Livewire Enterprise then acts as the central monitoring, reporting and analysis tool for the applications. This ensures control of the total estate through a single management system that has been designed for the management of these unattended devices.

Livewire Enterprise Product Overview



The Livewire Enterprise suite is a comprehensive management solution consisting of the modules outlined below:

Livewire Designer: the tools to build and integrate rich, intuitive, interactive applications

Livewire Runtime: a flexible, secure and stable client environment

Livewire Distributor: delivers content and applications to your device, ensuring fresh, updated content and versioning

Livewire Observer: centralized monitoring of network health, maximizing device availability

Livewire Analyzer: presents critical customer usage and health information
Enterprise: complete centralized management of remote devices

Livewire Enterprise Console: provides the communication infrastructure between all Livewire modules

With Livewire Enterprise, Livewire has moved the functionality and effectiveness of devices to a new level, with an open, modular architecture, specialized templates and wizards to increase the simplicity and efficiency of kiosk operation. The following provides a more in-depth outline.

Livewire Designer - Designer provides a framework that consists of building blocks, scripts and media files that make up the application, and allows you to develop applications for your devices using industry standard Windows-based applications such as Microsoft FrontPage, Photoshop and Macromedia Flash. Any ActiveX control can be utilized as a building block.

Professional authoring tools for layout, programming and previewing enable applications to be developed with ease. Each screen in the application can be configured separately, for example, some for public web browsing and others for showing high quality video clips.

For communication between building blocks, Livewire uses the standard JavaScript and VBScript script languages, with automatic script generation provided to handle component events. Designer also supports easy integration with legacy systems.

Applications developed using the Livewire Designer execute on the devices using Livewire Runtime. Updating your application simply requires the use of deployment wizards, allowing you to create Microsoft Windows Installation packages for easy installation on remote devices. Designer is intuitive and powerful and allows those with previous web development or similar experience to be productive immediately. Livewire Runtime is executed on every remote device where it provides a highly flexible, secure, stable and easy to manage environment for hosting applications created with Livewire Designer.

Livewire Runtime – As the link between your Windows operating system, hardware, peripherals and integrated applications, it constantly checks system health at an individual level to ensure that all the components are running smoothly and correctly. Any fault is rapidly detected. In the event of a system crash, Runtime can automatically restart the system and notify the server of the result.

Security settings for individual or groups of devices can be customized and easily modified as a result of Runtime's excellent interoperation with Microsoft technologies. This compatibility also allows seamless extensions to other applications to enhance the customer experience.

Installed with the Livewire Runtime are the client site Livewire Enterprise modules that can be remotely enabled from a Livewire Enterprise server.

Livewire Distributor – A rich and customised experience at every individual device can now be achieved using Distributor, providing fresh, updated applications and content. With scheduled or automated delivery of applications irrespective of bandwidth to individual or groups of devices, Distributor guarantees targeted content at every location.

Updating remote devices requires software and content to be sent and installed to a huge number of machines. Hence Designer is also designed to detect the minimum amount of information required for the update, a feature that greatly enhances the speed and reliability of updating devices.

All updates are stored on a database and applications under development can be automatically checked in and checked out to avoid accidental overwriting when multiple users are working on them. Livewire Distributor provides centralised content management functionality for users developing Livewire applications with version and source control.

With tangible benefits in terms of speed and ease of delivery, helping to keep devices up to their maximum usage, Distributor features fully centralized management of content, supporting:

- Narrow-band and broadband networks (including "mixed" networks)
- Delivery optimization – including file and byte-level checking

- Network throttling and Hierarchical distribution and replication of content for maximum network use and performance
- Intelligent inbox/outbox functionality for store-forward of content – optimizing operation and network usage, i.e. “fire and forget”.
- Based on standard HTTP file transfer technology with support for Background Intelligent Transfer Service (BITS)
- Tied with Livewire Attributing for addressing of a the self-service device and grouping (example store region x with hardware configuration y, running application’s Z, etc)
- Uses “checkpoint restart” which allowing for background application transfers which do not interrupt customer usage of the device and interruptions

Livewire Observer – Livewire Observer is a client/server management system that provides the necessary remote monitoring and event management. Simple to use, reliable and intuitive, Observer presents critical network monitoring information through a familiar Windows interface or Internet browser in standard, customizable reports.

Used throughout all Livewire applications, Observer also provides building blocks to detect and report the status of different system components – applications, hardware and peripheral devices. Specialized sensors called ‘reporters’ are installed on the remote device and monitor functionalities as configured. Reporters then send events to the central server to trigger an action (e.g. automated reboot) and to constantly provide information on the health of each remote device, for any size of network or grouping.

Downtime is minimized as the automated diagnosis and repair of problems occurs in real time; information on the status of applications is sent directly to a central location from where action and improvements are carried out. In addition, Observer can be configured to automatically react to an event, for example, if paper is low notification is sent to a service agent, or if a peripheral error is detected the machine can be rebooted. Observer keeps your device up and running and in control at all times.

Livewire Analyser – Establishing good measurements on the usage and operation of all remote devices in the field is key. Analyzer enables the measurement of usage and operation of a remote device, delivering comprehensive management information.

Analyser provides numerous levels of reporting and detailed usage information in intuitive standard or easily customisable reports, accessible via the Internet. Reports on the activity (usage and uptime) of devices are updated in real time and automatically logged to a central SQL database where receipt of log files are acknowledged.

With detailed information on user behaviour at your fingertips, you have the ability to fine tune application functionality and navigation structure exactly when it needs it. This ensures optimal performance while gathering valuable business information to affect any further modifications.

Livewire Analyser represents a major advance in information capture and reporting. It measures and records usage, operation and errors, then aggregates log files from all devices for distribution into a central SQL database to provide further comprehensive reporting.

Livewire Enterprise Console - Livewire Enterprise Console provides the communication infrastructure between all Livewire modules, effectively the central hub for the remote application management capabilities of Distributor, Observer and Analyzer. In this way, Livewire Enterprise allows you to view and manage your entire network of remotely located interactive devices from one intuitive interface.

Using Livewire Enterprise, you have the flexibility to manage your network as desired. The 'attributes' of each device can be configured to identify individual characteristics, for example location or version, for individual or groups of devices. These attributes can affect content distribution, task scheduling and other configurable behaviours. Hence content and applications can be targeted to individual devices and locations, providing media that is relevant to its audience.

Livewire Enterprise also allows for complete accountability of screened content, ensuring that live data is collected for all screened media, and system health is monitored at every level. System operation is guaranteed 24/7 as any error is immediately detected, diagnosed and an automated response generated.

Key Features & Differentiators

Security specifically addressing self-service device application requirements

- Devices for public use have somewhat different requirements around security than other devices. Providing sufficient tools and configurations is both costly and incomplete without specific experience. Livewire addresses this out of the box with:
- Improving client side security by removing the Windows desktop
- Suppressing and reporting any system or application dialogs
- Application "sand-boxing" to restrict the access for each applications to OS resources
- Added security for Internet Explorer in areas such as clearing of sensitive data between user sessions
- URL filtering to restrict access of IE
- Encapsulation of content players such as WMP, Real Player, QuickTime and Flash
- Blocking keyboard combinations

Maximizing self-service device availability

- Unattended self-service devices touch the consumer directly unlike for example POS terminals. Consequently, "user" of the system cannot be relied upon for notification of system failures.
- Many self-service devices have a large set of dependencies of both peripherals and back end system that all need to be available to provide the service. These dependencies need proactive monitoring to ensure availability. Livewire addresses this out of the box with:
 - Process monitoring of essential applications
 - Automated reaction to process failures to restore applications
 - Script monitoring to detect confused scripts inside of IE
 - Network status detection and associated device availability handling
 - Specific monitoring of peripherals such as printers and money controls
 - Standardized health status detection for self-service applications

Highly efficient peripheral integration

- There is a general lack of availability and standardization of peripheral drivers for Self-Service applications. This results in increased cost and risks to new projects. Livewire addresses these issues with:
 - Support for standards drivers such as Windows, OPOS and ActiveXFS
 - Standardized integration interface (Connectors)
 - Proactive peripheral "health" and status monitoring and reporting
 - Range of purposely-built drivers for cash acceptance, card readers, memory card readers, etc.

- Extensions to provide access from other applications (such as HTML, Flash and VB applications) to peripheral drivers

Unique “intelligent location awareness” with location based targeting and grouping

- Self-service devices provide a specific service at a specific physical location. In many cases the application needs to be “flavored” for the location. Managing such attributes transparently can be a costly exercise. Livewire provides the following to solve this:
 - Ability to specify attributes for each machine centrally that is available to the application in each location.
 - Integration with HTML and Flash to utilize these attributes
 - Application and content distribution is targeted based on location

Increasing the efficiency of development (speed to market, lower cost,)

- Sophisticated state management through a standardized object model
- Building-blocks to encapsulate and extend existing HTML or Flash applications,
- Built in versioning and roll-back of applications
- Standardized handling and integration for remote management
- Correct handling of keyboard accelerators
- Pop-up window handling
- Fully extendable touch screen keyboard
- Client state management to detect each user session and clear sensitive data between sessions
- Dialup (RAS) handling
- Transactions, usage reporting and associated statistics logged on each machine and aggregated to a central site
- A number of other self-service specific components

“Future-proofing” and ease of knowledge transfer

- Built using standard technologies (XML, SQL , COM+ .NET...)
- Standardized scripting client and server side, e.g. JScript, VBScript\
- Entire tool-set is based on common user interfaces easing the adoption of developers and operations staff

Enterprise awareness in client application enables manageability

- For self-service to be deployed in larger numbers they need to be “enterprise aware”. There are several different areas that need to be adequately covered to achieve this such as content management, application management, file transportation, application installation, status reporting, event reporting, transactional reporting, usage reporting and remote management. All of these areas need to be integrated into the client software application. This will require work in a variety of different areas that will result in additional costs and risks. Livewire provides an out of the box solution where all of the above functions have been purposely built for easy integration with self-service applications.
- Content transport, installation and removal
- Integrated flexible usage statistics
- Secure transactional data gathered
- State and event reporting
- Execution of remotely triggered commands

Scalable Message Transport enabling large networked installations

- A centralized operation of self-service devices needs to be able to send and receive messages from and to a central system. The messaging system needs to handle different network topologies and offer scalability as networks grow. Installing and maintaining messaging systems that supports the necessary requirement is quite costly. Livewire provides a unified messaging system that:

- Support for mixed networks such as LAN, WAN, Dialup
- Store and forward of all messages
- Support hierarchical distribution of messages
- Supports checkpoint restart of large messages
- Utilizes standard protocols such as HTTP and HTTPS
- Ability to utilize MS Background Intelligent Transfer Service (BITS)

Centralized overview for successful operation

- For efficient management of unattended devices a centralized overview is essential. Some of the functions required for self-service devices are somewhat unique. There is for example the usage statistic and availability status. Building such functionality is expensive without specific tools. Livewire provides a purposely built centralized overview system for self service that includes:
 - Reporting of usage statistics
 - Reporting of events on the machine such as available disk space going below threshold levels
 - Reporting of status changes on the machines such as peripheral or network unavailability
 - Screenshots from machines in the field
 - Flexible attribute based grouping of machines

Centralized control for lower cost of ownership

- For efficient operation of unattended devices a centralized control is essential. This involves content management, application management, remote configuration and remote control. Livewire provides a several benefits to efficiently operate a sizable estate:
 - Sophisticated content management with versioning and rollback
 - Support for installation of MSI packages
 - Automated response to events received from devices
 - Request of screen shots from machine
 - Remote reboot of machines
 - Built in integration for tools such as VNC for remote desktop
 - Ability to execute remote commands asynchronously on machines
 - Ability to execute remote control on many machines simultaneously
 - Flexible attribute bas

Implementation and Programming Methodology – A proven roadmap to success

Project Planning

In the initial kick-off meeting for the project, the local Implementation Team meets with key members of the customer's staff. This meeting sets realistic expectations for the project including project goals and objectives, scope, resources, constraints and time frames. The Implementation Project Team and the customer's implementation team are finalized and major responsibilities and commitments are defined.

The Project Plan

The Project Plan is the backbone to the entire project. During this step all project tasks and the associated resources are identified on the Detail Task Worksheets. Time frames and milestones are established. The resulting work plan is the baseline used during the implementation. It can be updated on a regular basis to reflect changes in resources, dates and milestones. A Project Plan Template is provided to give the team the option of developing and maintaining the Project Plan with project management software.

Operations Analysis

This step provides the Project Team with a concise, detailed analysis of the customer's current operations and business practices. Although some of this information was gathered during the sales process, further detail is needed to customize to the customer's business environment. During the analysis, the Implementation Consultant and the customer's Project Leader complete a detailed questionnaire with each major functional area of the customer's business. The consultant and customer gather business examples, sample reports, transaction sets, forms and other information.

Project Management

The Livewire team will coordinate activities with client's management, monitor the quality of work products, manage the project schedule, and communicate project progress to a clients management. Livewire will provide an engagement schedule at the beginning of each phase of the implementation schedule, which may be updated as contingencies and changes arise.

Milestones included in the plans are also used to measure progress. When milestones are reached, the client will have an opportunity to evaluate and comment on the work products that collectively represent each milestone. Actual progress will be tracked by identifying task and sub-milestone or milestone completion through the submission of work products.

Change Control Process

A Project Change Request (PCR) will be the vehicle for communicating change. The PCR must describe the change, the rationale for the change, and the effect the change will have on the project.

The designated Project Managers will review the proposed change and approve it for further investigation or reject it. Excessive change or changes deemed outside the core functionality may or may not result in additional charges. Livewire will specify any charges for such investigation. If the investigation is authorized, the Project Managers will sign the PCR, which will constitute approval for the investigation charges. Livewire will invoice a client for any such charges. The investigation will determine the effect that the implementation of the PCR will have on price, schedule and other terms and conditions of any agreements currently in place.

A written Change Authorization and/or Project Change Request (PCR) must be signed by both parties to authorize implementation of the investigated changes. NO HIDDEN CHARGES!

Hardware Compatibility – A Best of Breed Approach

The Livewire Content Delivery Network is designed to support a myriad of hardware devices and peripheral devices from kiosks to ATM's, handheld wireless PDA devices and POS workstations manufactured by many vendors. Livewire has established partnerships with "Best of Breed" providers to supply a host of hardware devices. The Livewire Content Delivery Network is truly "hardware agnostic". Virtually any web enabled Windows operating system powered device can be utilized on the network.

Summary

A system configured to do the things you want in the manner you want them done....period! All this in an economically attractive package that reduces up-front costs and allows technology investment security through annual licensing and maintenance.

Leave the technology to us!

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